EPIPHORA FROM CONGENITAL ATRESIA OF THE PUNCTA LACRYMALIA—SUCCESSFUL OPERATION FOR ITS RELIEF.

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UNTIL the occurrence of the following case in my own practice caused me to examine somewhat into the literature of the subject, I had an idea that congenital absence or atresia of the puncta lacrymalia was not a very rare anomaly.

I find, however, that it is passed over in silence by the majority of treatises I have been able to consult, and only three cases are on record in the periodicals devoted to ophthalmology.

The history of my own case is as follows:

H. L. C., ten years of age, is reported by his parents to have had a "watery eye" since his earliest infancy. He has never had any inflammatory trouble or traumatic injury to either eye. On examination I found a constant epiphora of the left eye, and searching for a cause found the lids in place with no signs of past or present inflammation. The papilla of the punctum was not at all pronounced on either lid, being manifest simply as a very slight elevation of the inner margin of the lid. There was no punctum, but occupying the position the punctum usually does was a dimly defined whitish-yellow ring surrounding a darker centre which was very slightly depressed. A most careful examination by means of the oblique light and a strongly magnifying lens failed to detect even the smallest opening. The whole space was covered by smooth, shining epithelium, and the smallest probe glided over the

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surface without penetrating. The condition of the upper and lower lids of the left eye and the lower lid of the right eye was substantially the same. The punctum of the right upper lid was small but permeable. There was no watering of the right eye. I examined the lid of a sister who came with him, and found her puncta small, but pervious.

At that time I had not read the account of Zehender's case reported below, and not knowing to what depth the atresia might extend, I thought it wiser to search for the canaliculus than to attempt to open the punctum. I therefore made an incision with the scissors about 2 *mm.* inward from the ordinary position of the punctum on the lower lid, at right angles to the course of the canaliculus. I then searched by means of a No. 2 Bowman's probe for the canaliculus, and had no difficulty in finding it, and pushing the probe to the nasal wall of the sac. I then introduced the canaliculus knife, and opened the canaliculus for the distance of about 2 *mm.* Two days afterward he returned, completely relieved of his "watery eye." I found the opening I had made in the canaliculus nicely hugging the ball, and as the relief was perfect and the patient unruly, I did not deem it necessary to operate on the other lid.

The only references to congenital absence of the punctum I have been able to find have been by Fick,[1] v. Walther,[2] and Desmarres.[3]

Fick only says: "that Morgagni relates an instance of congenital absence of the puncta, but this is exceedingly rare." V. Walther says: "Atresia of the puncta and the beginning of the canals, aside from monopsia and micropsia, is not to be met with as a congenital defect."

Desmarres has more to say about it than is to be found in any systematic treatise I have examined. He says: "It appears, according to many authors, that this anomaly of conformation is far from being rare. Seiler, Shoen, C. Labus, Carron, and many others have noted it, but for the most

[1] "A Treatise on the Diseases of the Eye," by George Fick. New edition, with notes by R. Wilbank. Lond., 1826. P. 268.

[2] "Lehre von d. Augenkrankheiten," by Ph. Fr. v. Walther. Freyberg, 1849. 2 B., p. 205.

[3] "Traité théorique et pratique des maladies des yeux." Paris, 1854. T. 1, pp. 280, 281.

part with a concomitant absence of the eye. I have seen a goodly number of patients affected with lachrymation, in whom the lachrymal canaliculi were wanting, and where there was no evidence of inflammation, but all had had in their infancy trouble with their eyes, which had continued for some time. Are these absences of the canaliculi congenital, or were they closed during the progress of the infantile inflammation? I cannot say. Be that, however, as it may, I would only call these absences congenital when they are seen in the newly born (though I am far from denying that it might be otherwise)."

Mooren,[1] in his statistics of 108,416 patients, gives only a single instance of defectus punctorum lacrymalium. Schirmer, in his treatise on the diseases of the lachrymal apparatus, in *Graefe und Saemisch's Handbuch*, dismisses the subject with a line which refers to Zehender's case given below.

A more extensive research into the literature might bring to light some other cases, but it is evidently an anomaly of very unusual occurrence.

The first case observed and described with any detail or accuracy is that of Zehender.[2] It was in the person of a girl of twelve years, who had lachrymation of right eye since infancy. Examination showed an absence of both puncta in R. and of the lower punctum in L. The papillæ were very slightly marked, but there was a whitish ring with a darker depression in its centre which was covered with epithelium. The most careful examination by means of the magnifying glass failed to discover any opening. This dark spot was punctured with a discision needle, and it was found to enter the canaliculus, and water injected into it passed to the sac. The patient was relieved of her troublesome lachrymation.[3]

The other two cases are from the practice of Dr. Hugo Magnus, of Breslau. The first was reported in *Zehender's*

[1] "Fünf Lustra oph. Wirksamkeit," 1882.

[2] *Zehender's Monatsbl. f. Augenheilk.*, B. v., 1867, p. 131.

[3] While reading the proof of this paper, *Zehender's Monatsbl.*, for January, '84, has come to hand containing an account of a second case seen by Zehender very similar to his first.

Monatsbl., B. xiii., p. 176. In this both the lower puncta were absent, and there was no trace of papillæ. In the second case, (*Hirschberg's Centralbl.*, April, 1880,) there was dacryocystitis of the R. eye in a girl of twenty-one years, and both lower puncta were absent. The edges of the lid were perfectly smooth, with no signs of papillæ. The upper canaliculus of the R. eye was slit, and the inflammation of the sac treated. Two attempts were made to find a punctum or canaliculus by making incisions at the place where they should be found, but without avail.

All inquiries as to the cause of these congenital absences of the punctum, whether simply from over-skinning by epithelium, or from a real lack of the papillæ, are, of course, mere matters of speculation. Desmarres raises the doubt as to whether they are to be considered as congenital when seen beyond the period of early infancy, looking upon them as due to adhesive inflammation. As a matter of fact, we know that adhesions about the punctum and canal are very rarely indeed the results of even long-continued inflammatory processes, affecting the palpebral margin, and we have little difficulty in keeping open incisions which we make for therapeutical purposes.

In view of this fact, I should look upon all atresiæ or absences of the puncta, when unaccompanied by evidences of very severe palpebral inflammation, as of prenatal origin.